

REMARKS

This application has been reviewed in light of the non-final Office Action dated September 26, 2007. Claims 28-36 are now pending, with Claims 28, 35, and 36 in independent form. Claims 1-27 have been cancelled by this Amendment without prejudice or disclaimer of the subject matter presented therein. Claims 28-36 have been added to provide Applicants with a more complete scope of protection. Support for these claims can be found at least in the original claims 1-27, now cancelled.

Claims 1, 9, 19, and 27 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 5,543,855 (Yamada et al.). Claim 2 stands rejected under 35 U.S.C. §103(a) as allegedly anticipated by U.S. Patent No. 5,543,855 (Yamada et al.), in view of Damera-Venkata et al. “Adaptive Threshold Modulation for Error Diffusion Halftoning”. Claims 3, 5, 10-15, and 20-26 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,543,855 (Yamada et al.), in view of Damera-Venkata et al. “Adaptive Threshold Modulation for Error Diffusion Halftoning”, and further in view of U.S. Patent No. 6,148,101 (Tanaka et al.). Claims 4 and 6 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,543,855 (Yamada et al.), in view of Damera-Venkata et al. “Adaptive Threshold Modulation for Error Diffusion Halftoning”, and further in view of U.S. Patent No. 6,148,101 (Tanaka et al.), and further in view of Mulligan, Jeffrey B; “Methods for Spatiotemporal Dithering”. Applicants respectfully submit that the claims are patentable over the rejecting references taken separately or in any proper combination for at least the following reasons.

Independent Claim 28 requires a method implemented at least in part by a computer for facilitating the reduction of tone scale of a video, the video having a plurality of frames, each of the frames having a plurality of pixels, the method including the steps of: determining a quantization error of a base pixel of a current frame of the video; diffusing at least some of the quantization error to one or more pixels of a video frame temporally neighboring the current frame; and storing information associated with the diffusing in a computer-readable storage medium.

A notable feature of Claim 28 is the --diffusing at least some of said quantization error to one or more pixels of a video frame temporally

neighboring said current frame--. Page 7, lines 9-14 of the present application's specification highlights the value of diffusing quantization error across pixels in temporally neighboring video frames ("3-D error diffusion"), as opposed to merely diffusing quantization error across pixels within a single frame ("2-D error diffusion"). In particular, this portion of the specification states that "The method differs from still image halftoning, in that the quantization error at a pixel is spread to its three dimensional (3-D) spatiotemporal neighbors, rather than only the two dimensional spatial neighbors. The 3-D error diffusion takes advantage of the temporal characteristics of [the] human visual system, which tend[s] to conceal the portions of the quantization error spread in the temporal direction."

As allegedly teaching such diffusing of quantization error to temporally neighboring video frames, the Office Action refers to col. 4, lines 10-41 of the Yamada et al. Patent. See page 3 of the Office Action, the paragraph beginning "diffusing first portions...". No other references are understood to be cited as teaching or suggesting this feature present in new Claim 28.

In contrast to Claim 28, the cited portion of the Yamada et al. Patent describes distributing (i.e., diffusing) "weighted errors to accumulation errors for respective pixels stored in a line buffer memory 108, more specifically, accumulation errors of pixels on a line currently being scanned (first line) or pixels on the next line (second line)." Such "first line" and "second line" referred to by the Yamada et al. Patent are not understood to pertain to temporally neighboring video frames, as recited in Claim 28. In other words, the Yamada et al. Patent's reference to diffusing weighted errors to pixels on a line of pixels currently being scanned or to pixels on a next line to be scanned is not understood to refer to the diffusing of "quantization error to one or more pixels of a video frame temporally neighboring said current frame", as required by Claim 28.

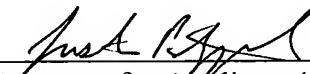
For at least the above discussed reasons, Applicants respectfully submit that Claim 28 is patentable over the rejecting references taken separately or in any proper combination for at least the above-discussed reasons.

Independent Claims 35 and 36 include the same or similar features as those discussed above in connection with Claim 28 and, therefore, are submitted to be patentable for at least the same reasons.

The other claims in this application depend from one of the independent claims discussed above and, therefore, also are submitted to be patentable for at least the same reasons. Since each dependent claim is deemed to define an additional aspect of the invention, individual consideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and the allowance of the present application.

Respectfully submitted,



Attorney for ~~Applicant(s)~~
Registration No. 52,118

Justin D. Petruzzelli/dh
Rochester, NY 14650
Telephone: 585-726-7522
Facsimile: 585-477-4646

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.